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Heart Failure

SAFETY, LEFT VENTRICULAR REVERSE REMODELING AND LONG-TERM OUTCOME AFTER CARDIAC RESYNCHRONIZATION THERAPY IN THE ELDERLY

ACC Moderated Poster Contributions
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Purpose: Despite a firm association between heart failure and ageing, limited data are available on the effect of cardiac resynchronization therapy (CRT) in the elderly. We therefore sought to evaluate safety, left ventricular reverse remodeling (LVRR) and long term outcome after CRT in the elderly.

Methods: A total of 798 CRT recipients (208 elderly: age ≥75 yrs; 590 non-elderly: age <75 yrs) underwent clinical and echocardiographic evaluation at baseline and 6-month follow-up. Adverse events (AEs) within 24h (in-hospital) and 30d (early) after implantation were reported. Primary end point (median follow-up 39 months) was all-cause mortality.

Results: Similar incidence of in-hospital and early AEs was observed in elderly and non-elderly patients (Table 1). At 6-month follow-up, magnitude of LVRR was similar in both groups (p=0.65). During long term follow-up, higher mortality rate was observed in the elderly, starting 4 yrs after CRT (p=0.01). In the elderly, multivariable Cox model identified 2 independent prognostic factors: glomerular filtration rate (GFR; HR 0.977, p=0.01) and 6-min walk-test (6MWT; HR 0.996, p<0.01), after adjustment for age, ischemic etiology, diabetes, atrial fibrillation and LV volume.

Conclusions: CRT implantation in elderly was as safe as in non-elderly patients. Despite comparable LVRR after CRT in both groups, all-cause mortality remained higher in the elderly, but starting 4 yrs after implantation. In the elderly, independent prognostic factors were GFR and 6MWT.

Table 1 **In-hospital and Early Adverse Events after CRT implantation by age**

		Total N=798 n(%)	Age <75 years n(%)	Age ≥75 years n(%)	p-value
0 - 24h	**In-hospital adverse events**	23 (2.9)	16 (2.7)	7 (3.4)	0.552
	Pneumothorax	6 (0.8)	3 (0.5)	3 (1.4)	0.158
	Pocket hematoma	4 (0.5)	2 (0.3)	2 (1.0)	0.250
	Sinus Coronarius Dissection, Lead Perforation or Pericardial Effusion	2 (0.3)	1 (0.2)	1 (0.5)	0.563
	LV lead dislodgement	11 (1.4)	10 (1.7)	1 (0.5)	0.218
24h - 30d	**Early adverse events**	20 (2.5)	15 (2.5)	5 (2.4)	0.984
	Pocket hematoma	2 (1)	1 (0.2)	1 (0.5)	0.418
	LV lead dislodgement	14 (1.8)	11 (1.9)	3 (1.4)	0.748
	Device infections/Explantation	4 (0.5)	3 (0.5)	1 (0.5)	0.995

Statistical analysis according to the method of Kaplan-Meier with log rank test comparison